Pre-Activity Worksheet: A Walk In The Woods

General Description
In the activity you will do this week during your learning/discussion group, you will be examining the IU environment and learning about experimental design. In order to be prepared for this activity, complete this worksheet.

Reading
Browse the Ecology chapters in your text (chapters 53-54). Carefully read the section on How Science is Done on pages 5-7. Carefully study Figure 1.4 and read the box “How biologists do their work” on page 7.

Definitions
Write a definition of the following words. Use your text, textbook glossary, and your previous knowledge to create the best definition possible. Remember to connect your definitions to experimentation.

1) hypothesis

2) control

3) observations

4) case studies

5) deduction

Questions
Answer the following questions. You will explore your answers to these questions in-depth during learning/discussion group.
1) What is the difference between observational studies and manipulative studies? Do you think one type of investigation is better than the other? Defend your answer.

2) Describe several ways in which population, community and ecosystem level ecological studies might differ. For example, population studies might be manipulative more often than ecosystem studies.

3) Scientific hypotheses must be testable. What kind of ideas are untestable? Provide both general descriptions and examples for two types of ideas that are untestable.